

Listing of Claims:

Claim 1 (currently amended): A method for determining the location of the interface between fat and lean tissue in a cut of meat, comprising the steps of:

providing a generally frusto-conical probe tip having a point;

defining in the probe tip a reception aperture and at least one emission aperture,

the reception aperture being located at the central axis of the probe tip;

locating a light detector remotely from the probe tip;

inserting a the probe tip progressively into the cut;

originating light at a source located remotely from the probe tip;

transmitting ~~the~~ incident light from the source to the at least one emission aperture in the probe tip via optical fiber;

emitting light from the probe tip and into the cut; ~~and~~

transmitting reflected light from the reception aperture through optical fiber to the
light detector; and

monitoring the light returning to the tip from the cut.

Claim 2 (original): A method according to claim 1 wherein monitoring the returning light comprises monitoring for a decrease in returning light.

Claim 3 (original): A method according to claim 2 comprising the additional step of correlating the amount of returned light with the physical location of the probe tip.

Claim 4: CANCELED

Claim 5: CANCELED

Claim 6: CANCELED

Claim 7 (original): A method according to claim ~~6~~ 1 wherein defining at least one emission aperture comprises locating a plurality of emission apertures in an array around the reception aperture.

Claim 8 (previously amended): A method according to claim 1 wherein the step of originating light comprises selecting a light source from among the group consisting of light-emitting diodes and lasers.

Claim 9 (original): A method according to claim 8 wherein selecting a light source comprises selecting a source of green light.

Claim 10 (currently amended): A method according to claim ~~5~~ 1 wherein the step of transmitting incident light comprises disposing the optical fiber between the light source and the at least one emission aperture.

Claim 11 (currently amended): A method according to claim 5 1 wherein transmitting reflected light comprises disposing optical fiber between the reception aperture and the light detector.

Claim 12 (previously amended): A method according to claim 1 wherein the step of inserting a probe tip comprises the steps of:

- defining in the probe tip an aperture;
- providing a light detector;
- disposing a beam-splitter;
- transmitting incident light from the light source to the aperture via the beam splitter; and
- transmitting returning light from the aperture to the light detector via the beam splitter.

Claim 13 (original): A method according to claim 1 wherein the step of inserting a probe tip comprises inserting a plurality of probes.

Claim 14 (currently amended): A method for determining the location of the interface between fat and lean tissue in a cut of meat, comprising the steps of:

- providing a sharp probe tip having a conical portion tapering toward a point;
- defining in the probe tip a reception aperture and at least one emission aperture,
- the reception aperture being located on the central axis of and on the point of the probe tip;
- providing a light detector remotely from the tip;

inserting the probe tip progressively into the cut;
determining the physical location of the probe tip;
transmitting incident light from a light source located remotely from the probe,
through optical fiber, to the at least one emission aperture;
emitting light from the probe tip and into the cut, ~~the light being originated at a~~
~~source remote from the probe;~~
transmitting returning light from the reception aperture through optical fiber to the
light detector;
monitoring the light returning to the tip from the cut; and
correlating the amount of returning light with the physical location of the probe
tip.

Claim 15 (original): A method according to claim 14 wherein monitoring the returning
light comprises monitoring for a decrease in returning light.

Claim 16: CANCELED

Claim 17: CANCELED

Claim 18: CANCELED

Claim 19 (currently amended): A method according to claim ~~18~~ 14 wherein defining at least one emission aperture comprises locating a plurality of emission apertures in the conical portion of the tip in an array around the reception aperture.

Claim 20 (original): A method according to claim 19 wherein the step of generating light comprises selecting a light source from among the group consisting of light-emitting diodes and lasers.

Claim 21 (original): A method according to claim 20 wherein selecting a light source comprises selecting a source of green light.

Claim 22 (original): A method according to claim 21 wherein transmitting incident light comprises disposing optical fiber between the light source and the at least one emission aperture, and wherein transmitting reflected light comprises disposing optical fiber between the reception aperture and the light detector.

Claim 23 (previously amended): A method according to claim 14 wherein the step of inserting a probe tip comprises inserting a plurality of probes.

Claim 24 (previously added): A method for determining the location of the interface between fat and lean tissue in a cut of meat, comprising the steps of:

- providing a sharp probe tip having a conical portion tapering toward a point;
- defining in the probe tip a reception aperture and at least one emission aperture;
- inserting the probe tip progressively into the cut;
- determining the physical location of the probe tip;
- emitting light from the probe tip and into the cut, the light being originated at a source remote from the probe;
- monitoring the light returning to the tip from the cut; and
- correlating the amount of returning light with the physical location of the probe tip;

wherein defining a reception aperture comprises locating the reception aperture at the central axis of and on the point of the probe tip.